

Directions: This worksheet, along with the Distributive Property Worksheet, will help you review some of the most important concepts for your first test. Make sure to show all your work. You may check your work with a calculator. Do your best.

Translate each verbal expression into an equivalent algebraic expression (go from words to symbols).

1. Difference of 10 and a number x _____
2. x increased by 17 _____
3. Product of x and 7 plus 21 _____
4. n cubed minus 7 _____
5. x squared times 4 _____
6. Quotient of 14 and x _____
7. Four less than five times a number x _____

Use the order of operations to simplify. Show ALL your work.

8. $9 - 32 \div 4$ _____
9. $20 \div (8 - (10 - 8)^2)$ _____
10. $7 + 10 \cdot 5 - 15$ _____
11. $\frac{141 - 3^2}{4^3 + 2}$ _____

Evaluate each expression if $a = -12$, $b = 0.5$, and $c = \frac{1}{2}$.

12. $-4ab$ _____
13. $-3b^2$ _____
14. $-2a^2$ _____
15. $c^2 \left(-\frac{1}{3} \right)$ _____

16. List out the first 15 perfect squares: _____

Name the sets or sets of numbers to which each real number belongs: Natural, Whole, Integer, Rational, or Irrational.

17. $\frac{4}{5}$
18. 0
19. $\sqrt{15}$
20. -3
21. $\sqrt{36}$

Find each sum.

22. $28 + 13 =$ _____

23. $18 + (-54) =$ _____

24. $-12 + 25 =$ _____

25. $-14 + 11 =$ _____

26. $-19 + (-3) =$ _____

27. $-9 + (-17) =$ _____

Find each difference. (Remember that subtraction is the same as addition of the opposite)

28. $31 - 12 =$ _____

29. $53 - 47 =$ _____

30. $28 - 39 =$ _____

31. $-15 - 65 =$ _____

32. $-11 - (-12) =$ _____

33. $-25 - (-36) =$ _____

34. $-\frac{1}{2} - \left(-\frac{1}{2}\right) =$ _____

35. $-\frac{1}{3} - \frac{1}{6} =$ _____

Find each product or quotient.

36. $5(-7) =$ _____

37. $-4(11) =$ _____

38. $-6(-12) =$ _____

39. $7(-25) =$ _____

40. $\left(\frac{1}{2}\right)\left(\frac{2}{3}\right) =$ _____

41. $\left(-\frac{3}{5}\right)\left(\frac{1}{6}\right) =$ _____

42. $\frac{3}{4}(80) =$ _____

43. $-3(-20) =$ _____

44. $-\frac{4}{5} \div \frac{2}{15} =$ _____

Simplify each expression.

45. $5(-2a) - 8a$ _____

46. $-6(3x) + 12x$ _____

47. $3(4n - n)$ _____

48. $-4(2d - d)$ _____